

REMARKS

Favorable reconsideration of the application as currently amended, is respectfully requested. Claims 1, 3, 4, 40-42, 66-71, and 89-91 are pending in the application. Claims 2, 5-39, 43-65, 72-88, 92-113 have been canceled. Claims 1, 40, 66, 69, 71 and 89 have been amended. Basis for the claim amendments may be found *at least* in the non-limiting embodiments of FIGS. 1, 3, 10, and 11 and their associated description in the specification. No New Matter has been added.

At the outset, Applicant notes that the Official Action asserts Claims 2, 5-39, 43-65, 72-88, and 92-113 to be withdrawn from consideration. However, Applicant notes that these claims have been canceled. Applicant requests that the Examiner acknowledge the same in the next Official communication.

By way of summary, the Official Action presents the following issues. Claims 1, 3, 4, 40-42 and 89-91 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ebata (US 20020137569; hereinafter “Ebata”) in view of Teruhi et al (US 20030072269A1; hereinafter “Teruhi”). Claims 66-71 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Abdollahi et al (US 20030035425A1; hereinafter “Abdollahi”) in view of Teruhi. Applicant traverses the rejection based on the following.

Ebata is directed to a technique for preventing broadcast storm in a multi-hop wireless communication network where messages are broadcast on a common wireless resource. Teruhi merely discloses conventional communication technology which distributes data to a plurality of paths. Teruhi is similar to the known technique (IEEE 802.3ad (Link Aggregation)) described in the Background section of the Application’s specification.

The Official Action asserts that Ebata does not show “communicate through a plurality of communication media each formed of at least one relay node, wherein include an assuming unit, which handles a plurality of ports connected to the plurality of communication media among ports belonging to the base node as one virtual port to assume the plurality of communication media to be one node.” To overcome this deficiency of Ebata, the Official Action turns to Teruhi for a suggestion of the deficiencies of Ebata.

In response to the rejection, Applicant has amended claim 1 to recite

a first base node connected to one or more base nodes through a first network, said first base node further connected to said one or more base nodes through a second network other than said first network,

said first based node includes a frame analysis unit which handles a first port connected to said first network and a second port connected to said second network as one virtual port to assume said first and second network to be one node in broadcast transfer and multicast transfer of a data frame, wherein,

in normal operation of said communication system, said frame analysis unit processes transmission of said data frame from one port selected from among said ports assumed as said virtual port,

in response to a failure detection of said communication system, said frame analysis unit selects one of: a process of transmitting said data frame from one port selected from said ports assumed as said virtual port, and a process of transmitting said data frame from all of a plurality of ports selected from said ports assumed as said virtual port, and performs the selected process according to a condition where said detected failure occurs, and

in a process of receiving said broadcast data frame or multicast data frame,

in normal operation of said communication system, said frame analysis unit performs a process of receiving said broadcast data frame or multicast data frame,

in response to failure detection of said communication system, said frame analysis unit selects one of: a process of receiving said data frame as it is, and a process of performing either reception or discarding of said received data frame based on said port which received said data frame and said base node which

transmitted said data frame, and performs said selected processing according to a condition where said detected failure occurs.

However, both Ebata and Teruhi fail to disclose the specific broadcast transmission processing and broadcast reception processing which is controlled based on a failure occurrence condition in a communication system.

For example, in broadcast transmission processing, there is a possibility that a data frame cannot be transmitted to all base nodes only by one transmission of a data frame according to a failure condition. For this reason, in order to transmit the data frame broadcast to as many base nodes as possible, depending on a failure condition, the transmission is carried out through one port or a plurality of ports, according to Claim 1.

In addition, in broadcast reception processing, since there is a possibility that a base node receives multiple copies of the same data frame if the data frame is transmitted from a plurality of nodes, processing for preventing multiple reception is performed.

In view of the above discussion, Applicant requests the Examiner to withdraw the rejection of Claim 1. Independent Claims 40 and 89 are also believed to be patentable because the above quoted features of Claim 1 have also been added to independent Claims 40 and 89.

Dependent Claims 3, 4, 41, 42, 90, and 91 are patentable based at least on their respective dependencies.

Turning next to the rejection of claims 66-71 under 35 U.S.C. § 103(a) as being unpatentable over Abdollahi in view of Teruhi, the Official Action takes the position (page 14) that Abdollahi does not teach “through a plurality of communication media each formed of at least one relay in a communication system, which comprises an assuming function of assuming the plurality of communication media to be one node by handling a plurality of ports connected

to the plurality of communication media among ports belonging to Teruhi.” To overcome this deficiency of Abdollahi, the Examiner turns to Teruhi for a suggestion of implementing the method of Teruhi in the system of Abdollahi. Abdollahi relates to communication networks, such as audio-video program communication networks, that carry digital information from a source to multiple remote sites. At least one of the remote site includes router nodes.

In response to the rejection, Applicant has amended independent Claim 66 to include language added to Claim 1. Applicant traverses the rejection of Claims 66 because the combined teachings of Abdollahi and Teruhi fail to teach or suggest the features now recited in Claim 66.

Specifically, both Abdollahi and Teruhi fail to disclose the specific broadcast transmission processing and broadcast reception processing which is controlled based on a failure occurrence condition, as recited in Claim 66.

Dependent Claims 67-71 are allowable at least because of their dependency from Claim 66.

Conclusion

In view of the above, it is believed that the Application is now in condition for allowance. An early indication to that effect is respectfully requested. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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